



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/448,508	11/24/1999	CONAL P. WALSH	91436-220	5123

22463 7590 05/23/2002

SMART AND BIGGAR
438 UNIVERSITY AVENUE
SUITE 1500 BOX 111
TORONTO, ON M5G2K8
CANADA

EXAMINER

ARMSTRONG, ANGELA A

ART UNIT

PAPER NUMBER

2654

DATE MAILED: 05/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/448,508

Applicant(s)

WALSH, CONAL P.

Examiner

Angela A. Armstrong

Art Unit

2654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☒ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 19, 21, 23, 25, 27, and 29 are objected to because of the following informalities: as claimed, claim 19 reads “the computing device of claim 17”. However, claim 17 is a method claim. Examiner assumes claim 19 should refer to the computing device of claim 18. Claims 21, 23, 25, 27, and 29 all have similar informalities. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5, 18-19 and 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Kosaka et al (US Patent No. 5,220,629).

4. Regarding claims 1-3, 18-19 and 24-25 Kosaka discloses a speech synthesis apparatus and method and teaches

text analysis for determining the number of syllables in words in text segments,
indicating the utterance speed of the text based on the syllables,
and using the indicated utterance speed in generating synthetic speech from the text
at col. 8, line 39 – col. 10, line 62; Figure 34 and col. 21, line 49 –col. 22, line 35.

5. Regarding claim 5, Kosaka teaches changing the utterance speed of the based on threshold criteria at col. 9, line 34 – col. 10, line 16.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kosaka et al.
8. Regarding claim 4, Kosaka et al do not specifically teach decreasing the duration of pauses associated with selected punctuation in a text segment. However, it is well known to modify output duration of text-to-speech synthetic speech to reflect various punctuation in the text of interest.

Therefore, it would have been obvious to one of ordinary skill at the time of invention to modify the speech synthesis system of Kosaka et al to implement modifying the duration of pauses associated with punctuation in a text segment, for the purpose of making the synthetic speech sound more like conversational speech and hence sound more natural.

9. Claims 6-12, 20-21 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oikawa et al (US Patent No. 5,396,577) in view of Church (US Patent No. 5,146,405).
10. Regarding claims 6-7, 9-12, 20-21 and 26-27, Oikawa et al teaches
Text analysis at Figure 2, sub-block 2; col. 3, lines 13-50

Assigning playback rates to segments based on categorizations of a determined degree of importance for the text at col. 3, line 37 – col. 5, line 4

Generating synthetic speech based on the assigned playback rates and allows for the omission of speech for segments in which an indication of a slow playing rate was identified at col. 5, lines 28-37.

Oikawa et al do not specify that the categorizations of the determined degree of importance be based on grammatical analysis. Refer to Church who teach a method for part-of-speech determination and usage which implements grammatical analysis of text and identifies parts of speech (including nouns) of the text (Abstract), and suggests that speech synthesis needs parts-of-speech analysis of input text to produce a result that sounds like human speech (col. 1, lines 14-24.

Therefore, it would have been obvious to one of ordinary skill at the time of invention to perform grammatical analysis of text to identify parts of speech of the text, as taught by Church, to implement parts of speech as the categories of degrees of importance in the speech synthesis system of Oikawa et al, for the purpose of producing synthetic speech that sounds more like human speech, as taught by Church.

11. Regarding claim 8, Oikawa et al do not specifically teach decreasing the duration of pauses associated with selected punctuation in a text segment. However, it is well known to modify output duration of text-to-speech synthetic speech to reflect various punctuation in the text of interest.

Therefore, it would have been obvious to one of ordinary skill at the time of invention to modify the speech synthesis system of Oikawa et al to implement modifying the duration of

Art Unit: 2654

pauses associated with punctuation in a text segment, for the purpose of making the synthetic speech sound more like conversational speech and hence sound more natural.

12. Claims 13-17, 22-23 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oikawa et al (US Patent No. 5,396,577) in view of Richard et al (US Patent No. 5,924,068).

13. Regarding claims 13-14, 16-17, 22-23 and 28-29 Oikawa et al teaches

Text analysis at Figure 2, sub-block 2; col. 3, lines 13-50

Assigning playback rates to segments based on categorizations of a determined degree of importance for the text at col. 3, line 37 – col. 5, line 4

Generating synthetic speech based on the assigned playback rates and allows for the omission of speech for segments in which an indication of a slow playing rate was identified at col. 5, lines 28-37.

Oikawa et al do not specify that the categorizations of the determined degree of importance be based on an inventory of pre-selected words. Refer to Richard et al who teach a system that uses text-to-speech synthesis to provide audio output of user selected text which implements a dictionary to provide syntactic and semantic prosody and allows users to provide keywords which are used to determine what information is to be selected for synthesis. Users are able to determine which information is read and vary the rate at which the information is read (Abstract).

Therefore, it would have been obvious to one of ordinary skill at the time of invention to implement pre-selected words as the categories of degrees of importance in the speech synthesis system of Oikawa et al, for the purpose of allowing system users to determine what text is

Art Unit: 2654

synthesized and vary the rate at which the synthetic speech is produced, as suggested by Richard et al.

14. Regarding claim 15, Oikawa et al do not specifically teach decreasing the duration of pauses associated with selected punctuation in a text segment. However, it is well known to modify output duration of text-to-speech synthetic speech to reflect various punctuation in the text of interest.

Therefore, it would have been obvious to one of ordinary skill at the time of invention to modify the speech synthesis system of Oikawa et al to implement modifying the duration of pauses associated with punctuation in a text segment, for the purpose of making the synthetic speech sound more like conversational speech and hence sound more natural.

Response to Arguments

15. Applicant's arguments filed February 26, 2002, have been fully considered but they are not persuasive.

16. Regarding claims 1, 18, and 24, Applicant argues that the claims are not anticipated by Kosaka et al, because the syllable specific adjustments of Kosaka et al do not provide each and every element of applicant's claimed invention. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

17. Regarding claims 6, 20, and 26, in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be

Art Unit: 2654

established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Church teach a method for part-of-speech determination and usage which implements grammatical analysis of text and identifies parts of speech (including nouns) of the text (Abstract), and suggests that speech synthesis needs parts-of-speech analysis of input text to produce a result that sounds like human speech (col. 1, lines 14-24).

18. Regarding claims 13, 22, and 28, applicant argues that the combination of Oikawa et al and Richard et al do not teach or suggest all the claimed limitations. The examiner disagrees and argues that Oikawa et al teaches text analysis and assigning playback rates based on categorizations of a determined degree of importance and Richard et al teaches a degree of importance for generating synthetic speech representations of news articles based on a group of user selected keywords (which reads on the inventory of pre-selected words). Thus, the combination of Oikawa et al and Richard et al would teach analyzing text and assigning playback rates based on categorizations of a determined degree of importance, wherein the determined degree of importance is based on a group of pre-selected words (keywords) that have been defined by the user.

Art Unit: 2654

Conclusion

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela A. Armstrong whose telephone number is 703-308-6258. The examiner can normally be reached on Monday-Thursday 7:30-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

AAA
May 3, 2002


Richmond Dorvil
Primary Examiner